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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,124	10/09/2003	Thomas Sheng	3722-0165P	8071
2292	7590	05/13/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			MORRISON, THOMAS A	
			ART UNIT	PAPER NUMBER
			3653	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/681,124	SHENG ET AL.	
	Examiner	Art Unit	
	Thomas A. Morrison	3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 5-11, 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 12-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the March 21, 2005 election of species requirement in the reply filed on April 21, 2005 is acknowledged. The traversal is on the ground(s) that it should be no undue burden on the Examiner to consider all claims in the single application. Also, it is argued that because at least generic claim 1 should be in condition for allowance, this Election of Species Requirement should also be overcome and withdrawn. This is not found persuasive because the instant application discloses five (5) patentably distinct species that have substantially different structures and substantially different operating parameters for separating sheets. For example, the claims are directed to different structures including gravity mechanisms, magnetic mechanisms, and brake mechanisms. As such, the search for all of these different structures would place an undue burden on the examiner. Moreover, claim 1 stands rejected as explained in the rejection below.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, it is unclear what is meant by the recited friction roller that is **selectively rotatably mounted** to the first shaft.

Regarding claim 14, it is unclear what is meant by the recited **long** slot.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4 and 12-17, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Publication No. 62-275941. In particular, Japanese Publication No. 62-275941 discloses all of the limitations of claims 1-4 and 12-17.

Regarding claim 1, Figs. 1-6 show a sheet separator for an automatic document feeder for separating and feeding a first sheet and a second sheet adjacent to the first sheet sequentially, the sheet separator including

a separating roller (2) driven to rotate by a driving device (not shown);

a friction roller (including 3) having a first rotating state (Fig. 1), in which the friction roller (including 3) is driven to rotate by the separating roller (2),

a second rotating state (See also "CONSTITUTION" of English Abstract), in which the friction roller (including 3) is driven to rotate by the second sheet, and

a stationary state (See also "CONSTITUTION" of English Abstract), in which the friction roller (including 3) is stationary, wherein in the stationary state of the friction roller (including 3), the separating roller (2) directly feeds the first sheet, and the friction

roller (including 3) pushes the second sheet toward the first sheet so as to make the first sheet slide on the second sheet (See also "CONSTITUTION" of English Abstract);

a first shaft (including 4) inserted into the friction roller (including 3) to provide a damping torque for stopping the rotation of the friction roller (including 3), and

a force-applying mechanism (including 1, 7a and 7b) for pushing the separating roller (2) against the friction roller (including 3). More specifically, Fig. 1 shows the first rotating state, in which the friction roller (including 3) is driven to rotate by the separating roller (2). With regard to the second rotating state, claim 1 requires one sheet (i.e., a second sheet) to rotate the friction roller (including 3). When multiple sheets (e.g., first and second sheets) enter between the separating and friction rollers, one of the sheets (e.g., the first sheet) will be fed, and the second sheet will not be fed. After the first sheet has been fed, the second sheet will be fed and the second sheet will rotate the friction roller (including 3) as required by the second rotating state in claim 1. Regarding the stationary state, the "CONSTITUTION" section of the English Abstract explains the operation of the brake roller 3 (i.e., the friction roller). As such, Japanese Publication No. 62-275941 meets all of the limitations of claim 1.

Regarding claim 2, Fig. 3 shows that the friction roller (including 3) is selectively rotatably mounted to the first shaft (including 4), and the first shaft (including 4) provides the damping torque for stopping the rotation of the friction roller (including 3) according to a damping force between the first shaft (including 4) and the friction roller (including 3).

Regarding claim 3, Fig. 1 shows that the force-applying mechanism (including 1, 7a and 7b) is a resilient mechanism for pushing the separating roller (2) and the friction roller (including 3) against each other using a resilient force.

Regarding claim 4, Fig. 1 shows that the resilient mechanism (including 1, 7a and 7b) includes a spring (7a or 7b).

Regarding claim 12, Figs. 3 and 5 show that the friction roller (including 3) has

an outer column (15) formed with a first hole; and

an inner column (13) formed with a second hole fit with the first shaft (including 4), the inner column (13) being arranged within the first hole of the outer column (15).

Regarding claim 13, Fig. 3 shows that the inner column (13) has

a first column (near 13e); and

a second column (13d) connected to the first column (near 13e), the inner column (13) being fixed to the outer column (15) through the first column (near 13e).

Regarding claim 14, Fig. 3 shows that the inner column (13) is formed with a long slot (13c) extending along an axial direction of the first shaft (including 4), and

the friction roller (including 3) further includes a resilient member (11 or 12), the inner column (13) is fit with the resilient member (11 or 12) and shrunk to contact the first shaft (including 4) to produce the damping torque. Fig. 5 appears to show the inner column 13 in contact with the first shaft (including 4)

Regarding claim 15, Fig. 3 shows that the resilient member (11 or 12) can be considered to be a helical spring.

Regarding claim 16, Fig. 3 shows that the resilient member (11 or 12) can be considered to be an elastic ring.

Regarding claim 17, Fig. 3 shows that the damping force is a friction force.

4. Claims 1, 3-4 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,016,866 (Takahashi). In particular, the Takahashi patent discloses all of the limitations of claims 1, 3-4 and 17.

Regarding claim 1, Fig. 9 shows a sheet separator for an automatic document feeder for separating and feeding a first sheet and a second sheet adjacent to the first sheet sequentially, the sheet separator including

a separating roller (42) driven to rotate by a driving device (72);

a friction roller (including 44) having a first rotating state (Fig. 9), in which the friction roller (including 44) is driven to rotate by the separating roller (42),

a second rotating state (See also column 6, line 68 to column 7, line 4), in which the friction roller (including 44) is driven to rotate by the second sheet, and

a stationary state (See also column 6, line 68 to column 7, line 4), in which the friction roller (including 44) is stationary, wherein in the stationary state of the friction roller (including 44), the separating roller (42) directly feeds the first sheet, and the

friction roller (including 44) pushes the second sheet toward the first sheet so as to make the first sheet slide on the second sheet (Fig. 9);

a first shaft (including 62) inserted into the friction roller (including 44) to provide a damping torque for stopping the rotation of the friction roller (including 44), and

a force-applying mechanism (including 48 and 60) for pushing the separating roller (42) against the friction roller (including 44). More specifically, Fig. 9 shows the first rotating state, in which the friction roller (including 44) is driven to rotate by the separating roller (42). With regard to the second rotating state, claim 1 requires one sheet (i.e., a second sheet) to rotate the friction roller (including 44). When multiple sheets (e.g., first and second sheets) enter between the separating and friction rollers, one of the sheets (e.g., the first sheet) will be fed, and the second sheet will not be fed. After the first sheet has been fed, the second sheet will then be fed and the second sheet will rotate the friction roller (including 44) as required by the second rotating state in claim 1. See also column 6, line 68 to column 7, line 4. Regarding the stationary state, column 6, line 68 to column 7, line 4 explains the halting of the friction roller (including 44). As such, the Takahashi patent meets all of the limitations of claim 1.

Regarding claim 3, Fig. 1 shows that the force-applying mechanism (including 60 and 48) is a resilient mechanism for pushing the separating roller (42) and the friction roller (including 44) against each other using a resilient force.

Regarding claim 4, Fig. 1 shows that the resilient mechanism (including 60 and 48) includes a spring (48).

Regarding claim 17, Figs. 1 and 3 show that the damping force is a friction force.

Allowable Subject Matter


5. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Walsh can be reached on (571) 272-6944. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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